Notice of Allowability	Application No.	Applicant(s)	
	10/700,801	GEISSLER, ALFRED	
	Examiner	Art Unit	
	Erica E Cadugan	3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *interview of 5/24/05*.

2. ☒ The allowed claim(s) is/are *1-14*.

3. ☒ The drawings filed on *03 November 2003* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 5/12/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *5/24/05* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on May 24, 2005, Jeffrey Lotspeich quested an extension of time for 1 MONTH(S) and authorized the Director to charge Deposit Account No. 020460 the required fee of $120 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

The attached amendment to the claims has been entered.

2. The following is an examiner's statement of reasons for allowance:

Regarding the applied U.S. Pat. No. 5,533,846 to Geissler, Examiner agrees with Applicant's assertion (found in the attachment to the interview summary) that '846 does not teach that "the head support further comprises a rotary drive for turning the swivel head around the axis of rotation of the head support together with the spindle motor" as set forth in independent claim 1. As also noted by Applicant, in '846, the spindle motor 7 does not rotate with the swivel head 3 (see Figure 2, for example, as well as any locations pointed out by Applicant).

Also, there is no combinable teaching in the prior art of record that would reasonably motivate one having ordinary skill in the art to so modify the teachings of '846, and thus, '846 does not render obvious the present invention as set forth in independent claim 1.

Additionally, it is noted that U.S. Pat. No. 5,413,439 to Wu et al. (and U.S. Pat. No. 5,391,026 to Wu is similar) teaches a machining unit having a "head support" movable in at least the vertical direction as viewed in Figure 8 of '439. The support has a front portion and a 45-degree axis of rotation about which the "swivel head" 10 pivots (see Figures 1-2). Note that swivel head 10 has a main spindle 12 that is driven by a spindle motor 11 (Figure 1), which spindle motor is swiveled about the 45-degree swivel axis along with the swivel head 10 via a rotary drive including drive device 80 (Figure 1).

However, in '439, the spindle motor is not "aligned coaxially" with the 45-degree axis of rotation of the head-support as set forth in claim 1 (see Figures 1, 2, and 8, for example).

For at least this reasoning, '439 (and similarly '026) does not anticipate the present invention as set forth in independent claim 1.

Also, there is no combinable teaching in the prior art of record that would reasonably motivate one having ordinary skill in the art to so modify the teachings of either of '439 or '026, and thus, neither of '439 or '026 renders obvious the present invention as set forth in independent claim 1.

The aforedescribed prior art being representative of the closest prior art of record to the present invention as set forth in independent claim 1, the prior art of record neither anticipates nor renders obvious the present invention as set forth in independent claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E Cadugan whose telephone number is (571) 272-4474. The examiner can normally be reached on M-F, 7:30 a.m. to 5:00 p.m., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris H. Banks can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erica E Cadugan
Primary Examiner
Art Unit 3722

eec
May 24, 2005

ATTACHMENT TO EXR. AMDT.

IN THE CLAIMS:

Please enter the following amended claims:

1. (Currently Amended) A machining unit for a program-controlled milling and drilling machine, said machining unit comprising:

a head support movable in at least one coordinate axis ~~several coordinate axes~~, said support having a front portion ~~front face~~ and an axis of rotation pointing forward and downward by 45° relative to vertical;

a swivel head arranged on the front portion ~~front face~~ of the head support;

a spindle head ~~spindle nose~~ fixedly attached to the swivel head, said spindle head ~~spindle nose~~ further comprising a working spindle, said spindle head ~~spindle nose~~ being arranged at an axis at an angle of 45° relative to said axis of rotation of said head support;

a spindle motor mounted in the head support, said motor having a shaft and being aligned coaxially with respect to said axis of rotation of said head support~~, and said motor having a shaft for rotating the swivel head about the axis of rotation of the head support~~; ~~and~~

a bevel gear arranged on a ~~on the~~ protruding end of the shaft,

the swivel head further having a cylindrical hollow housing member coaxial with respect to the axis of rotation of the head support, and the head support having a housing neck in which the housing member of the swivel head is rotatably supported; and

the head support further comprises a rotary drive for turning the swivel head around the axis of rotation of the head support together with the spindle motor.

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2. (Currently Amended) The machining unit of claim 1, wherein ~~the head support further comprises a rotary drive for turning the swivel head,~~ said rotary drive has a ~~having a~~ clearance-free clamped gear train including a toothed belt drive and a pinion, said pinion constantly engaging a spur ring mounted on the spindle motor.

3. (Original) The machining unit of claim 1, wherein a speed changing gear arrangement is positioned downstream of the bevel gear.

4. (Original) The machining unit of claim 2, wherein a speed changing gear arrangement is positioned downstream of the bevel gear.

5. (Currently Amended) The machining unit according to claim 1, wherein at least one supporting ring is mounted in the ~~cylindrical hollow~~ housing neck of the head support, and wherein said at least one supporting ring is supported in at least one peripheral groove formed in the housing member of the swivel head.

6. (Currently Amended) The machining unit according to claim 4, wherein at least one supporting ring is mounted in the ~~cylindrical hollow~~ housing neck of the head support, and wherein said at least one supporting ring is supported in at least one peripheral groove formed in the housing member of the swivel head.

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7. (Currently Amended) The machining unit according to claim 1, wherein a front half portion of a spindle ~~the spindle~~ motor housing is fixed by the housing member of the swivel head and a rear portion of the spindle motor housing containing a spur ~~the spur~~ ring projects into the head support.

8. (Currently Amended) The machining unit according to claim 5, wherein a front half portion of a spindle ~~the spindle~~ motor housing is fixed by the housing member of the swivel head and a rear portion of the spindle motor housing containing a spur ~~the spur~~ ring projects into the head support.

9. (Currently Amended) The machining unit according to claim 6, wherein a front half portion of a spindle ~~the spindle~~ motor housing is fixed by the housing member of the swivel head and a rear portion of the spindle motor housing containing a spur ~~the spur~~ ring projects into the head support.

10. (Currently Amended) The machining unit according to claim 1, wherein the spindle head ~~spindle nose~~ has a box-like rear portion and wherein an external flexible pipe adapted for protecting electrical and liquid lines extends from the head support to said box-like rear portion.

11. (Currently Amended) The machining unit according to claim 10, wherein the flexible pipe is connected to the head support via a rotating elbow connector and is pivotably connected to the box-like rear portion ~~portion~~ of the spindle nose via an adapter.

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12. (Original) The machining unit according to claim 11, wherein the adapter contains a bushing having convex external surfaces against which a pivotable end ring abuts in a sliding fit.

13. (Original) The machining unit according to claim 11, wherein rolling elements are supported in the adapter.

14. (Original) The machining unit according to claim 12, wherein rolling elements are supported in the adapter.